THE AMERICAN RAILROAD PROBLEM: A REPLY

THE avowed and manifest purpose of *The American Railroad Problem* was to present a comprehensive analysis of the economics of railroad transportation in the United States from the standpoint of public policy. The inclusion of the sub-title "A Study in War and Reconstruction" discloses the further fact that special emphasis was to be placed upon recent developments in railroad operation and regulation. In view of these circumstances, it was found necessary, in the first place, to present the outstanding facts of this recent experience — particularly to indicate, analyze, and interpret the "problems, policies, activities, and results which emerged in the war administration of the railroads" — and to describe and discuss the new legislation over which this war experience exerted a large influence. In the second place, it was deemed essential, on the constructive side, to go beyond the mere discussion of rates and financial adjustments, and to include a consideration of public as against private management in the railroad industry, multiple corporate ownership and operation as against a policy of deliberate unification, the positive goal of achieving an adequate and efficient transportation system as against the mere negative removal of "outrageous" abuses in rates and service, the maintenance of continuity in the railroad service through the recognition of labor relationships in the normal regulative process as against chaotic and ineffective adjustment of labor controversies through temporary extra-regulative agencies. On this basis an attempt was made to discover the interdependence between the various capital issues raised, and to present the whole as a unified public problem.

While it is not the object of this note to discuss standards of scientific criticism, it is perhaps worthy of at least passing

notice that Professor Brown's review[1] appears to have little regard for the scope and purpose of the book. A twelve-page review is devoted to less than that number of pages out of a volume approaching five hundred pages in length. The intimate relationship between the various elements of the so-called railroad problem seems to have been entirely ignored, the reviewer being content to deal with a few questions of "rate reasonableness and rate regulation." The monopolistic character of the railroad industry and the demands of public policy in the formulation of regulative principles seem to have had a negligible influence upon the reviewer's analysis, the critic appearing to rely almost exclusively upon such reasoning as is primarily applicable under competitive circumstances in private industry. The realities of the railroad situation seem to possess no vital bearing upon the American railroad problem — not even the facts of the war period, with reference to operation and regulation and legislative development, facts and circumstances of so extraordinary a character and dealing with a period so recent that the sifting of evidence and interpretation of events would appear to be indispensable to "a study of war and reconstruction" in the railroad industry, even to an economist who is deeply imbued with the necessity of studying "fundamental principles" and who generally spurns the "easy by-paths" of factual, descriptive, and historical teaching and writing. There is, of course, the grudging concession that "often there is" a place for inductive reasoning in the study of principles. "But," it is immediately averred, "studies of occurrences and policies in their chronological order, coupled with commentary and discussion, do not constitute inductive investigation as the expression is understood in physical science." This dictum, in the opinion of the reviewer, apparently renders largely irrelevant the material dealing with the war-time administration of the railroads, with the analysis of the historic basis of the various railroad problems, with the background and character of the new legislative principles

1. Quarterly Journal of Economics, vol. xxxvi, No. 2 (February, 1922), pp. 323–334.

and machinery for the regulation of the carriers. There is no characteristic methodology, apparently, for the study of social as distinct from physical science. The facts of social science are assumed to be as simple and as objective as those of natural science. The complexities of economic relationships (as applied to functioning groups and classes rather than to the mere production "factors" of economic theory), the influence of the prevailing social psychology, the obstacles of the dominant political philosophy, the currents of opinion in which these social facts find expression, all seemingly make no contribution to the economist's formulation of the demands of public policy. History and experience, according to this conception, are things apart; they neither help to explain present difficulties, nor do they provide a basis for the solution of future maladjustments. The economist is a repository of a natural and absolute truth, even in matters involving public problems and practical adjustments, which may be deduced through abstract reasoning, if sufficiently incisive and refined, in complete detachment from the embarrassing forces of social living. Has not this very detachment from the social realities, tangible and intangible, rather than any flagrant unsoundness in fundamental analysis of principles, contributed most to the frequently-lamented sterility of the efforts of economists to mold the direction of public policy in large matters of vital public concern?

But the writer was constrained to present this note, not by way of defense of his book against the general judgment of the reviewer, but primarily because of the fundamental issues raised by him with reference to "the author's underlying philosophy regarding the basis of rate reasonableness." Professor Brown's conclusion is stated as follows: "It is in his study of rate standards and rate regulation that, the reviewer believes, Professor Sharfman has most signally failed in the adequacy and convincingness of his analysis. Indeed, the reviewer believes the solution offered to be fundamentally unsound." The unsoundness of the solution, in his opinion, rests on two grounds: first, he believes

the proposal that, for the future, actual cost be accepted as the standard of valuation of railroad property for rate-making purposes to be unsatisfactory and mischievous; and second, he considers the proposal for the solution of the so-called strong and weak road problem, through the recapture by the government of part of the excess earnings of the more prosperous roads and through the adoption of a policy of consolidation, to be equally undesirable and mistaken.

With regard to the first of these problems, he states that "the issue is clearly joined . . . between cost of production and cost of reproduction as the basis of valuation for the purpose of rate regulation." Professor Brown's rejection of the actual cost basis and his support of the cost of reproduction method is almost entirely limited, in this discussion, to the question of land values. He contends that "so far as the unearned increment of land value is concerned, society cannot lightly deny it to the railroads while permiting it in all other lines of business." It might be a sufficient reply to this contention that there is fully as much reason for denying to the railroads the speculative return that arises out of the unearned increment in land as there is for denying them all other elements of speculative profit. The railroads are public service industries, beneficiaries of special legal privileges, engaged in the performance of an indispensable function, and operated, in the long run, under conditions of virtual monopoly. The very adoption of a system of rate regulation and profit limitation involves the recognition that railroads must be differentiated, from the standpoint of social control, from ordinary industrial undertakings. Competitive reasoning is as inapplicable to the railroad industry in the matter of land values as it is in the entire range of rates, service, capitalization, labor relationships, etc., which have brought the body of principles and machinery of our regulative system into existence. To the reviewer there may be sufficiently convincing reasons for believing that it may be a desirable policy "to tax this increment (the unearned increment) heavily wherever it

occurs, to tax it altogether out of existence, even to tax land values in general at so high a rate as to appropriate all economic rent for public purposes." But to insist, in connection with the specific problem of railroad rate regulation, that unless the "single tax" program or a general extension of "special land-value taxation" is approved, it is unsound to advocate the denial of the unearned increment in land values to corporations engaged in the performance of a public service, appears to suggest an absence rather than a mere suppression of logic.

What, concretely, are the objections offered to "doing away with the unearned increment of railway land while allowing owners of land used in all other ways to enjoy such an increment?" First, it is claimed that such a policy would operate to prevent railroad-building. If prospective builders of railroad lines know that they cannot enjoy the gains to be derived from the unearned increment in land values which they would be permitted to receive in connection with other uses of such land, "they will prefer some other use or uses." There appears to be an assumption here that the owners of land are themselves necessarily the builders or owners of the future railroad property, and hence exercise a deliberate choice between alternative uses. There seems to be a complete failure to recognize that common carriers may exercise the sovereign right of eminent domain. There is a clear implication that the possibility of return through the unearned increment on the land itself, as a separate element, is the determining factor in influencing the direction of capital commitments, rather than the adequacy of the financial return on the investment as a whole. The principles governing valuation for purposes of condemnation are confused with those governing valuation for rate-making purposes. The denial of the unearned increment in the latter case, after the land has been acquired by the carrier and has become railroad property, does not prevent or invalidate the purchase of land by a railroad company "at a price as high as would probably have to be paid for it by persons intending to use it otherwise."

And while such a price would doubtless be "higher in a growing country than the present income would justify, because of the anticipation of future gains," the actual cost standard of valuation for rate-making purposes would prevent further additions to the value of the land, in the course of its life as railroad property, because of the mere growth of the community or because of any other circumstances that are entirely extraneous to the performance of the transportation function.

In the second place, the writer's assertion that the acceptance of the actual investment basis, as distinct from reproduction cost, need not necessarily result in an illiberal rate of policy is construed by the reviewer to involve the necessity of allowing "higher current earnings" under all conditions, in order "to compensate the railroads for not permitting them to enjoy the to-be-expected increased value of their land, when such enjoyment is permitted in all other lines of business." On the basis of this construction, he expresses alarm lest transportation charges be highest in the early history of a railroad, when the community which it serves is least able to bear them, and lest, in case of "a declining community and a decreasing value of land," the public be made to bear transportation charges that are not only unnecessarily burdensome but impossible of application. The fears of the reviewer arise out of an erroneous construction of the demands of the situation. Railroad rates must be so adjusted as to maintain the credit of the carriers, so that capital may be attracted into the industry for necessary improvements and extensions; but merely because, as stated by the writer, "the needs of the transportation service and the exigencies of the credit situation must always be taken into account in the adjustment of the level of transportation charges," an obligation does not necessarily arise, therefore, to recognize specifically such speculative increments as are involved in the appreciation of land values. There need be no guaranty that railroad rates will yield an adequate return, from the beginning, on an "excessive" actual cost, nor that such a return will

always be maintained, regardless of the ability of the community to bear the charges essential to produce it. Transportation agencies are not economically advantageous from the public standpoint unless the service which they render is of sufficient importance to the community to enable them to pay their way. Under any circumstances, there is neither need nor obligation to provide compensation for "the to-be-expected increased value of their land." Competition for capital by other enterprises would be met by adjusting the rate of return, in direct response to the capital needs of the railroad industry and the conditions of the money market, and not by inflating the valuation base for reasons wholly independent of the performance of the transportation service. Under a system of private ownership of railroads, the rewards to capital must be sufficiently liberal to maintain the industry in competition with alternative demands for industrial investment, the relative stability of income and risk of loss being taken into account; but investors in railroad securities are concerned with the income yield of their capital commitments, and not with the speculative gains arising out of land ownership. And in a public service industry like railroad transportation, the recognition by public authority of such speculative claims for their own sake constitutes a subversion of the function of the state to provide, directly or indirectly, modern highway facilities.

But the relative merits of actual cost and cost of reproduction as standards of valuation for rate-making purposes are not confined to differences in treatment of appreciation of land values. The value of railroad property, under each of these methods, is also affected by changing unit prices of labor and materials embodied in railroad plant and equipment, and by the degree of recognition accorded to intangibles. The writer's contention that, for the future, "actual cost of the property used in the transportation service, or actual investment committed to railroad enterprise, when honestly and prudently made, constitutes the natural basis for the computation of the fair rate of return to which those

engaged in the operation of a public service industry are reasonably entitled" is applicable to land valuation only as one element of the valuation process; and the cost of reproduction method must likewise be extended to the entire complex of railroad plant, materials, and rights, whether tangible or intangible, which constitute railroad property. The logical application of the cost of reproduction standard may be made to involve, for example, a recognition of going concern value and franchise value and the use of "multipliers" in land valuation. Representatives of the carriers have not hesitated to submit such claims, and to present "convincing" arguments in support of them, in spite of the fact that their acceptance would enmesh the courts in the realm of mere conjecture and speculation, and would, in its practical outcome, lead to a virtual abdication by public authority of its powers of effective regulation. As new elements of value are pressed into recognition under the cost of reproduction standard, there is a gradual absorption of all earnings resulting from any prevailing level of rates, whether reasonable or unreasonable, and an inevitable approach toward "charging what the traffic will bear" in its absolute and monopolistic connotation.

It is important to keep constantly in mind that the nature of the valuation process in any given case is dependent fundamentally upon the purpose for which the result is to be utilized. The value of railroad property for purposes of rate-making, whether ascertained on the actual cost or the reproduction cost basis, does not correspond to the economist's "exchange value" or price in the market. Such a value would render all efforts at regulation futile. The earnings of a road cannot be used as the chief factor in determining the base by which the reasonableness of these earnings is to be tested. Courts and commissions merely seek to arrive at a figure which, in view of the purpose of the valuation, will most nearly reflect the demands of public policy in recognizing the equitable claims of the owners of the property and of the users of the service. In pursuit of this purpose, the "fair value" concept emerged. Both the

recognition of this concept, and the cost of reproduction method which has been given primary consideration in its development, are largely the creation of legal reasoning, and not of economic analysis. The failure of our legislatures to define specific standards by which the reasonableness of rates is to be tested led to the judicial enunciation of the "fair value" concept; the traditional preoccupation of our courts with private property rights, and the dominantly individualistic temper of the common law, led to an overemphasis of competitive considerations in an industry naturally monopolistic.

The avowed basis of the cost of reproduction theory, as presented by its advocates, is a competitive basis. In supporting this theory for railroad valuation Professor Brown says: "However high may have been the necessary cost of a plant in a given competitive business, prices of the goods produced cannot be kept high if new concerns can construct equivalent plants at low cost. And on the other hand, however low the amount which concerns already in such a business had to pay for necessary real estate and equipment, if the cost to new entrants is high, these new concerns will not come in unless they expect to be able to charge prices commensurate with the present cost of plant." In the first place, such reasoning would normally support cost of replacement as a basis of valuation rather than cost of reproduction — that is, the cost of producing a plant capable of rendering an equivalent service, rather than the cost of reproducing the identical units of the existing plant. These two valuations do not necessarily come to the same result. Both single roads and railroad systems as they exist today are the outcome of long periods of growth and development. On a strictly competitive basis, there is no reason for saddling upon the public in perpetuity the burdens of unsound judgment or mistaken experimentation in the location or construction or equipment of the line. The cost of replacement, however, involves highly conjectural estimates based upon widely speculative judgments, and regulating authorities shrink from entering upon so uncharted a field. But

essentially, if in lesser degree, the cost of reproduction method involves a similar surrender to mere speculation. It assumes a complete extinction of the railroad property under valuation, without any corresponding modification of the external circumstances and conditions (as to land values, prosperity of the community, price levels, etc.) for which the existence of the railroad line may have been in large part responsible. It has been said with much truth that the "reproduction theory contemplates an imaginary community in which an imaginary corporation makes imaginary estimates of the cost of an imaginary railroad," and that it involves "the estimates of engineers as to what it will cost to buy land that will never be bought again, to duplicate property that will never have to be duplicated, and to build up a business that will never again have to be developed." [2]

Fundamentally, the pernicious defect of the reasoning that supports the cost of reproduction theory arises from a confusion between competitive conditions and conditions of monopoly — from an attempt to think monopoly and competition at the same time. The railroads are allowed to enjoy the status of monopoly, and at the same time are assumed to be subject to the normal exigencies of competitive pressure. There is a failure to recognize the moral certainty not only that the existing plant will never be reproduced as such, but that no such plant will ever be created in competition with the existing plant. To think and argue in competitive terms (whether the conclusion leads to cost of replacement or to cost of reproduction as the valuation base) is to run counter to the realities of the situation. By all standards of sound economic analysis, railroads are admittedly natural monopolies; and they are largely monopolistic in fact, in spite of the many legal obstacles that have in the past been designed to retard this natural tendency to monopoly. Under the recent legislation there is a decided *rapprochment* between the economic demands of the

2. E. W. Bemis, in the Proceedings of the National Association of Railway Commissioners, 1913.

situation and the legal status of the railroad industry: co-operative efforts are legalized, extensions and abandonments are made subject to public approval, consolidation into large systems is recognized as desirable and actively encouraged, and the construction of new lines is made to depend upon governmental authorization grounded in public convenience and necessity. For the future, then, under conditions that are dominantly monopolistic, actual cost constitutes the natural valuation standard for purposes of rate-making. If the price of the transportation service under a system of public regulation, in order to achieve as nearly as possible the result attained in private industry through competition, should normally approach cost of production, then the capital cost of the service that constitutes one element of such cost of production is much more truly reflected by actual cost than by reproduction cost as a basis of valuation; for railroad systems are developed rather than created outright, and hence no *momentary* capital cost, such as is attained through the reproduction cost method, corresponds to the capital cost which may legitimately be included, even by imputation, in the cost of the service. The actual cost theory, on the other hand, accepts the effective sacrifice of the investor, over a period of time which corresponds to the duration of the physical upbuilding of the plant, as the basis for the computation of the fair rate of return; and this rate of return, under a system of private ownership, can and should be so adjusted as to afford such incentive as is necessary to stimulate efficiency of management, and such an income yield as will maintain the credit of the carriers as affected by the capital needs of the transportation service and the general movements of the money market for fixed investments.

In the light of the foregoing differences of outlook and policy, and in view of limitations of space, it is unnecessary to undertake a detailed discussion of the second of the two problems raised by the reviewer — the question of recapturing excess earnings and of encouraging railroad consolidations. These policies, which, in their essence, have been

incorporated in the Transportation Act of 1920 and have been recognized by most thoughtful students of the railroad problem as constituting constructive advances in the field of public control, are challenged by Professor Brown, partly because he fails to give due recognition to the equity of the public in the railroad industry, and partly because he envisages the American railroad net as a rigid organization consisting of a large number of distinct railroad corporations rather than as a single transportation system. Neither in purpose nor in probable effect does the excess earnings proposal involve the subsidizing of less favored regions by more favored ones. Insofar as differing advantages are equalized under our transportation system, the situation is an outcome of the rate structure — of the disregard of distance in the adjustment of the relativity of rates — rather than of the adjustment of the general level of charges. The excess earnings provisions do not contemplate the artificial support of weak roads that are not needed, nor the increase of rates for those of them that *are* needed above a reasonably remunerative level. On the contrary, their purpose is to divert part of the surplus earnings of the strong roads — surplus earnings that arise out of a rate level that is deemed fair and reasonable for the ordinary lines. If the level of charges were so adjusted as to yield a reasonable, and not more than a reasonable, return to the strong roads, the country would be deprived of the necessary service of the weaker lines; the alternative policy is to allow a reasonable return for the roads as a whole, or in naturally delimited rate groups, and to recognize the equity of the public in the surplus earnings that emerge in case of the stronger roads. These roads are entitled to a fair return on their investment, which fair return, for the protection of the service, must be sufficiently liberal to stimulate efficient management and maintain railroad credit; but the earnings in excess of such a fair return should be equitably vested in the public, if the regulative process is to be effective and monopolistic exploitation is to be averted. In summary form, the argument has been stated as follows: "Federal

authority to regulate railroad rates is unquestioned and plenary, and its duty does not extend beyond allowing a fair return on the accepted value of the railroad property; but competitive rates must necessarily be uniform, and such uniformity inevitably leads to excess earnings for some of the carriers; the public, therefore, is equitably entitled to such earnings as exceed a fair return, and it is desirable that the public claim be made effective; the recapture of excess earnings, then, and their devotion to the public use in the transportation service, is but a device appropriate to the attainment of a socially desirable end."[3] It is to be noted, moreover, that this process does not involve a diversion of "some of the large returns of prosperous roads into a subsidy for weaker roads." The policy as advocated, and as incorporated in the new legislation, contemplates the creation of a reserve, out of the excess earnings recaptured by the government, for the extension of loans to carriers and for the purchase and lease of equipment — in other words, for the support of the transportation service as a whole. In like manner, the policy of deliberately encouraging railroad consolidation (or, better, compelling such consolidation) finds its source in the need of welding our many railroad lines into a coördinated transportation system. Primarily, the motive for unification is to secure greater operating efficiency — to bring about a fuller and more flexible utilization of plant and equipment, through the subordination of corporate advantage to common transportation needs; but a plan of orderly consolidation is bound to combine some of the weaker roads with the stronger lines, to lessen, if not eliminate entirely, the startling contrasts in earnings between prosperous and poor roads that are inevitable under a system of multiple corporate ownership, and hence, in the course of time, to render less important the question of the emergence and disposition of excess earnings. Unless the essentially public character of the transportation function is clearly recognized in these financial adjustments, and unless the goal of achieving an

3. The American Railroad Problem, p. 309.

adequate transportation *system* (as distinct from the chaotic conditions of the past) is measurably realized, there is little likelihood that the regulative method can withstand the pressure for out and out nationalization of the American railroads.

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SOME EFFECTS ON CERTAIN AGRICULTURAL PRODUCTS OF UNIFORM PERCENTAGE INCREASES IN FREIGHT RATES

THE policy of the Interstate Commerce Commission concerning post-war freight rate advances apparently has been to grant equal percentage increases for all commodities. This policy seems to have been adopted because of the resulting uniformity of change; the practice of charging "what the traffic would bear," which the railroads commonly adhered to in former years, has been discarded for the sake of this uniformity. No account seems to have been taken of the varying ability of different industries to meet the increased charges. In point of fact, however, if the "uniformity" desired is the maintenance of the existing price equilibrium between commodities and between localities then the change in rates must be proportioned to the relative part which freight charges play in total supply costs. The purpose of the present paper is merely to illustrate the truth of the above statement. The claim is not necessarily made that the existing equilibrium should be maintained; but this question may fairly be asked: "may not changes in freight rates be so made as to minimize their disturbance of other industries?" Admittedly there is no "normal" relationship between the prices of different commodities; factors affecting both supply and demand change so rapidly that the market is in a constant state of flux. Such a condition is essential